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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/674,650

09/30/2003

Shlomo Ovadia

42.P17372

4808

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06/28/2007

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EXAMINER

WANG, QUAN ZHEN

ART UNIT

PAPER NUMBER

2613

MAIL DATE

DELIVERY MODE

06/28/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/674,650

Applicant(s)

OVADIA ET AL.

Examiner

Quan-Zhen Wang

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2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 September 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-45 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>12/11/06, 3/6/06, 4/10/07</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: the underlined word "dynamically" in claim 9, line 5 is redundant.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 7 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 7 depends on itself.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 3, 6, 8-13, and 15 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Suzuki et al. (U.S. Patent US 6,891,793 B1).

Regarding claims 1 and 8-12, Suzuki discloses a method for routing data across an enterprise network (figs. 1 and 17) including a plurality of optical burst-switched (OBS) networks (the network formed by label switch nodes 1 and 2, and the network formed by label switch nodes 3 and 4), comprising: receiving a data transmission request from a node (PC) in a first network identifying a destination node in a second network remote to the first network to where the data is to be transmitted (destination); wherein transmission of the data requires the data to be routed along a route that spans at least a portion of multiple networks, including at least one OBS network (fig. 1, core network); employing an external gateway protocol (BGP, LDP and SNMP. BGP includes provisions for advertising an availability of routes across at least one OBS network; dynamically updating a routing table for a BGP router in response to route advertisements contained in a BGP UPDATE message received by that BGP router; the extension to the path attributes in the BGP UPDATE message includes an available wavelength attribute that indicates a status of the current wavelength availability between neighboring networks; includes an available fiber attribute that indicates a status of the current fiber availability between neighboring OBS networks; and a connection attribute that indicates whether a connection to an OBS network is available or not.) to route the data between egress and ingress nodes of the first, second, and any intermediate network(s) along the route; and employing an internal routing protocol (TCP/IP) to route the data through the first and second networks and

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any intermediate networks along the route, wherein the external gateway protocol includes provisions for updating an availability of lightpath routing across said at least one OBS network.

Regarding claim 3, Suzuki further discloses that the route traverse one OBS network (figs. 1 and 17, core network CN).

Regarding claim 6, the OBS of Suzuki is a PBS.

Regarding claim 13, data is routed between networks using hop-by-hop routing scheme in the system of Suzuki.

Regarding claim 15, data is routed between networks using a packetized transmission scheme (data transmitted in packets) in the system of Suzuki.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 2, 4-5 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al. (U.S. Patent US 6,891,793 B1).

Regarding claim 2 and 4-5, Suzuki differs from the claimed invention in that Suzuki does not specifically disclose that the first and second networks comprise OBS network, the first network comprises a non-OBS and the second network comprises a non-OBS. However, Suzuki further discloses that the network comprises OBS network

(CN) and non-OBS network. Therefore, it would have been obvious for one of ordinary skill in the art at the time when the invention was made to include OBS network the first and second networks, or not to include OBS network the first and second networks in order to provide communication services for customers based on the physical communication connections of the customers.

Regarding claim 14, Suzuki differs from the claimed invention in that Suzuki does not specifically disclose that the system comprising co-locating an OBS label edge router with an EGP route in at least one OBS networks. However, Suzuki further discloses that the network comprises a plurality of optical burst-switched networks (the network formed by label switch nodes 1 and 2, and the network formed by label switch nodes 3 and 4),. Therefore, it would have been obvious for one of ordinary skill in the art at the time when the invention was made to include more OBS network and co-locating an OBS label edge router with an EGP route in at least one OBS networks in order to provide communication services for customers based on the physical communication connections of the customers.

8. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al. (U.S. Patent US 6,891,793 B1) in view of Xiong et al. (Yijun Xiong et al., "Control architecture in optical burst-switched WDM networks", IEEE J. on Selected Areas in Communication, October 2000, pages 1838-1851).

Regarding claim 7, as it is understood in view of the above 112 problem, Suzuki differs from the claimed invention in that Suzuki does not specifically disclose that the

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OSB network comprises a WDM PBS network. However, a WDM PBS is well known in the art. For example, Xiong discloses a WDM PBS (WDM OBS). Therefore, it would have been obvious for one of ordinary skill in the art at the time when the invention was made to incorporate the WDM PBS disclosed by Xiong in the system of Suzuki in order to provide high transmission capacity and high-speed communications.

9. Claims 16, 19-22, 24-31, 33-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al. (U.S. Patent US 6,891,793 B1) in view of Zang et al. (U.S. Patent US 7,209,975 B1).

Regarding claims 16, 19, 21, 24-28, 30, 33-39, and 41-44, Suzuki discloses a method for routing data across an enterprise network (figs. 1 and 17) including a plurality of optical burst-switched networks (the network formed by label switch nodes 1 and 2, and the network formed by label switch nodes 3 and 4) and data can be transmitted between networks as an autonomous system and configuring a respective router operatively coupled to at least one non-OBS network to enable data transmissions between said at least one non-OBS network and at least one of the plurality of OBS networks. Suzuki differs from the claimed invention in that Suzuki does not specifically disclose designating at least one edge node in each OBS network as a BGP router. However, it is well known in the art to designate at least one edge node in each network as a BGP router. For example, Zang discloses designating at least one edge node in each network as a BGP router (fig. 3, NE 306, 307, 312 and 314), interchanging BGP UPDATE messages between the edge nodes that are

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designated as BGP routers, the BGP UPDATE messages including extensions for advertising the availability of PBS network routes; and dynamically updating routing tables for each BGP router in response to route advertisements contained in the BGP UPDATE messages. Therefore, it would have been obvious for one of ordinary skill in the art at the time when the invention was made to incorporate the BSP router, as it is disclosed by Zang, in the system of Suzuki, in order to extend the area coverage of the network. As to claims 30, 33-38, the modified system of Suzuki and Zang further differs from the claimed invention in that Suzuki and Zang do not specifically disclose a machine-readable medium embedded with instructions to perform operations for the system. However, Zang further discloses that management of the system comprises "a programmed general-purpose computer" (column 16, lines 1-13). Therefore, it would have been obvious for one of ordinary skill in the art at the time when the invention was made to develop commend instruction for the operation of the system and embed the program in a machine-readable medium in order to automatize the controlling and operation of the system.

Regarding claims 17, 22, 31, and 40, the OBS of Suzuki is a PBS.

Regarding claims 20 and 29, the modified system of Suzuki and Zang differs from the claimed invention in that Suzuki and Zang does not specifically disclose that the non-OBS comprises an Ethernet-based network. However, Examiner takes Official Notice that an Ethernet-based network is well known in the art. Therefore, it would have been obvious for one of ordinary skill in the art at the time when the invention was made to include a an Ethernet-based network as a non-OBS network in the modified system

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of Suzuki and Zang in order to extend service coverage and provide communication services for customers using an Ethernet-based network.

Regarding claim 45, Suzuki further discloses the system comprising at least one LAN (figs. 1 and 17).

10. Claims 18, 23, and 32, are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al. (U.S. Patent US 6,891,793 B1) in view of Zang et al. (U.S. Patent US 7,209,975 B1) and further Xiong et al. (Yijun Xiong et al., "Control architecture in optical burst-switched WDM networks", IEEE J. on Selected Areas in Communication, October 2000, pages 1838-1851).

Regarding claims 18, 23, and 32, the modified system of Suzuki and Zang differs from the claimed invention in that Suzuki and Zang do not specifically disclose that the OSB network comprises a WDM PBS network. However, a WDM PBS is well known in the art. For example, Xiong discloses a WDM PBS (WDM OBS). Therefore, it would have been obvious for one of ordinary skill in the art at the time when the invention was made to incorporate the WDM PBS disclosed by Xiong in the modified system of Suzuki and Zang in order to provide high transmission capacity and high-speed communication system.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quan-Zhen Wang whose telephone number is (571)


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272-3114. The examiner can normally be reached on 9:00 AM - 5:00 PM, Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571) 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

qzw
6/23/2007


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